

### **REMARKS**

Currently claims 11-22 are pending in the application identified above. By this Amendment no new claims are added and no claims are cancelled. In view of the following remarks and additional assertions, Applicants respectfully request that the Examiner reconsider his basis for rejecting the instant claimed invention.

#### **I. Allowable Subject Matter**

Applicants appreciate the indication that claims 13 and 15-20 are currently objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **II. Claim Rejections – 35 U.S.C. § 103**

The Examiner rejects claims 11, 12, 14, 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2006/0291578 to Singh et al. (hereinafter “Singh”) in view of U.S. Patent No. 6,628,738 to Peeters et al. (hereinafter “Peeters”), and further in view of U.S. Patent No. 6,862,552 to Goldstein et al. (hereinafter “Goldstein”). This rejection is respectfully traversed.

Applicants respectfully traverse this rejection because Singh, Peeters and Goldstein, whether taken alone or in combination, do not disclose or suggest the combination of features recited by the instant claimed invention.

In particular, claim 11, and as admitted by the Examiner, Singh fails to at least disclose teaching a noise power-calculating unit for calculating an electric power corresponding to a noise component contained in said demodulated signal based on said demodulated and outputting a noise power signal corresponding to the result of said calculation; a weighting factor-calculating unit for calculating a weighting factor for a branch metric based on said noise power signal and said transmission channel characteristic corresponding to said subcarrier component that is output from said interpolation filter unit; and a decoding unit for decoding said demodulated signal based on said weighting factor.

In addition, the Examiner has looked to Peeters to provide the timing error of the system based upon a demodulated signal based on a demodulated signal and outputting a noise power signal corresponding to the result of said calculation and a weighting factor-calculating unit for

calculating a weighting factor for a branch metric based on said noise power signal and said transmission channel characteristic corresponding to said subcarrier component that is output from said interpolation filter unit.

However, as far as Singh and Peeters are understood, Applicants respectfully assert that the combination fails to at least disclose or suggest an average power noise contained in the instant demodulated signal of the claimed invention.

In fact, the asserted combination of Singh in view of Peeters appears to only rise to the basis by which one of the shortcomings in the related in art, that is evidence for the motivation to improve upon the technology, by filing the instant application, was to correct the problem with a typical Euclidean distance that may have been calculated from a demodulated signal in the prior conventional wisdom. However, simply evaluating a Euclidean distance does not take into account the absolute amount of the average noise power contained in the demodulated signal or the signal-to-noise power ratio.

We believe that Peeters in combination with Singh only arises to suggest or disclose a particular Euclidean aspect of the signal-to-noise ratio. Support for this assertion may be found within column 7, including lines 29-32 of Peeters. That is to say that Peeters discusses the “phase detection unit PHASE may determine the difference between a received vector and the expected vector (determined by the closest constellation points in the constellation diagram) and can approximate the phase errors therefrom.”

However, we believe that this particular constellation evaluation is too closely related to the particular Euclidean distance which would not *amount to the absolute value of the average noise power contained in a demodulated signal*. Therefore, Applicants respectfully assert that for at least this basis, the asserted combination of Singh and Peeters fails to provide the requisite components of the instant claimed invention.

Beyond the asserted combination of Singh and Peeters, the Examiner also attempts to combine Goldstein to arrive at the requisite element of Applicants’ claimed invention. However, and *assuming arguendo*, for the purpose of a satisfactory combination that Goldstein may be relied upon to modify the system and method of Singh it appears that Goldstein would only result in a particular weighting factor for distance weight by the received signal. As such,

Applicants believe that the asserted combination of Singh, Peeters and Goldstein fail to render the instant claimed invention obvious for at least the basis asserted above with regards to the shortcomings of Peeters. Therefore, Applicants respectfully assert that the instant claimed invention, as recited in at least independent claims 11 and 21, is patentably distinct over the asserted combination of Singh, Peeters and Goldstein. Furthermore, and for at least the reasons asserted above with regards to independent claims 11 and 21, Applicants respectfully assert that similarly claims 12 and 22 also resting upon the combination in the asserted disclosure in Peeters, suffer for at least the same basis as asserted above with regards to claims 11 and 21, and therefore, are also patentably distinct for at least this same basis.

In addition, claims 13-20 which depend directly or indirectly from independent claims 11 and 12, are similarly found to be patentable distinct, for at least the basis by which the depend from independent claims 11 and 12, as well as for the additional features recited therein.

Accordingly, Applicants respectfully request that the Examiner withdraw the asserted combination of Singh, Peeters and Goldstein under § 103.

### III. Conclusion

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact William D. Titcomb Reg. No. 46,463 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

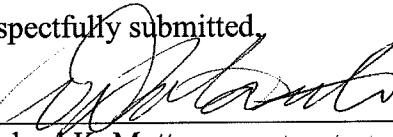
Application No. 10/555,443  
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Docket No.: 2257-0254PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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